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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/442,114	11/17/1999	KONSTANTINE I. IOURCHA	M-8107-2CUS	5437

7590 12/31/2002

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[REDACTED] ART UNIT [REDACTED] PAPER NUMBER

2624

DATE MAILED: 12/31/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No. 09/442,114	Applicant(s) Iourcha et al.
Examiner Anh Hong Do	Art Unit 2624



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.
- 4) Claim(s) 23-51 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) 36 and 45-51 is/are allowed.
- 6) Claim(s) 23-30, 32-35, 37-42, and 44 is/are rejected.
- 7) Claim(s) 31 and 43 is/are objected to.
- 8) Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some* c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

- 14) Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) Notice of References Cited (PTO-892) 4) Interview Summary (PTO-413) Paper No(s). _____
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) Notice of Informal Patent Application (PTO-152)
- 3) Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) Other: _____

Art Unit: 2624

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 10/1/2002 have been fully considered but they are not persuasive.

In response to the applicant's argument that Ryan does not teach "codeword portions for storing codewords, a bitmap portion for storing a set of indices, and wherein codeword defines a set of colors that approximate a pixel color set, and said indices map pixel color set to at least one of the colors", it is noted that: RAMs 4, 5, and 6 are reading locations (corresponding to the codeword portions recited in claim 23) for storing color pixel data in terms of a linear pixel code (corresponding to the codeword recited in claim 23) (see col. 14, lines 48-49); index registers 17 or 27 or 37 corresponds to a bitmap portion for storing first, second and third indices (corresponding to a set of indices recited in claim 23); col. 4, lines 13-15, clearly teaches the codewords (as disclosed in col. 14, lines 48-49) define at least three colors green, red and blue, that approximate the pixel color set; and col. 14, lines 56-59, clearly teaches the indices map pixel color set to at least one of the colors stored in RAMs 4, 5, or 6.

For the foregoing reasons, it is believed the rejection should be sustained.

Claim Rejections - 35 U.S.C. § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

Art Unit: 2624

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 23, 24, 27-30, 32-35, 37, 39, 42, and 44 are rejected under 35 U.S.C. 102(b) as being anticipated by Ryan et al. (U.S. Patent No. 4,821,208).

Regarding claims 23, 33 and 37, Ryan discloses;

- a codeword portion for storing at least two codewords (Fig. 1: color map RAM 4 or 5 or 6);
- a bitmap portion for storing a set of indices (Fig. 1: index register 17 or 27 or 37);
wherein said codewords define at least three colors that approximate the pixel color set (col. 4, lines 13-15), and said indices map the pixel color set to at least one of said at least three colors (col. 14, lines 56-59).

Regarding claims 24 and 39, Ryan teaches said set of indices includes a predefined index (col. 16, lines 49-51).

Regarding claims 27 and 42, Ryan teaches mapping a color key value associated with the original image block (col. 4, lines 13-16).

Regarding claim 28, Ryan teaches first portion for storing a first codeword and a second portion for storing a second codeword (col. 4, lines 61-66), and wherein said first codeword and said second codeword are used to indicate a block type for the original image block (col. 4, lines 61-66, teaches block of luminance-only primary color, and block of chrominance-only primary color).

Art Unit: 2624

Regarding claim 29, Ryan teaches first portion for storing a first codeword and a second portion for storing a second codeword (col. 4, lines 61-66), and wherein said at least three colors includes two computed colors if said first codeword is greater than said second codeword (col. 4, lines 61-66, teaches two computed colors of luminance-only and chrominance-only).

Regarding claim 30, Ryan teaches first portion for storing a first codeword and a second portion for storing a second codeword (col. 4, lines 61-66), and wherein said at least three colors includes at least one computed color (col. 4, lines 61-66) and said set of indices includes a predefined index if said first codeword is less than said second codeword (col. 16, lines 49-51).

Regarding claims 32 and 44, Ryan teaches said at least three colors includes one of said at least two codewords (Fig. 1: color map RAM 4 or 5 or 6, and col. 4, lines 13-15).

Regarding claim 34, Ryan teaches said at least three colors includes one of said at least one codewords (Fig. 1: color map RAM 4 or 5 or 6, and col. 4, lines 13-15) and a computed color (col. 4, lines 61-66, teaches at least one computed colors of luminance-only).

Regarding claim 35, Ryan teaches said set of colors includes at least three colors (col. 4, lines 13-15).

Claim Rejections - 35 U.S.C. § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

Art Unit: 2624

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 25, 26, 38, 40, and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ryan (U.S. Patent No. 4,821,208) in view of Normile et al. (U.S. Patent No. 5,822,465).

Regarding claims 25 and 40, although disclosing as in claims 23 and 37, Ryan does not specifically teach an identifier. One skilled in the art would have clearly recognized that the Ryan system aims to void quantization errors.

Normile, in the same field of endeavor, teaches a sequence header ID associated with the original image block (col. 21, lines 4-6), wherein the Normile's method is to reduce the errors associated with vector quantization (col. 3, lines 29-32).

Therefore, it would have been obvious to employ a header ID in Ryan as taught by Normile in order to avoid the quantization errors.

Regarding claims 26 and 41, Normile teaches mapping an alpha value associated with the original image (col. 19, lines 39-41).

Regarding claim 38, Normile teaches a header portion (col. 20, lines 49-51).

Allowable Subject Matter

6. Claims 36 and 45-51 are allowed.

7. Claims 31 and 43 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. The following is a statement of reasons for the indication of allowable subject matter:

Art Unit: 2624

Regarding claims 31 and 43, the prior art, taken either singly or in combination, does not teach:

- said at least three colors are computed using a geometric element fitted to said pixel color set so that said geometric element has a minimal moment of inertia.

Regarding independent 36, the prior art, taken either singly or in combination, does not teach:

- said set of colors are computed using a geometric element fitted to said pixel color set so that said geometric element has a minimal moment of inertia.

Regarding claim 45, the prior art, taken either singly or in combination, does not teach:

- wherein said first and second codewords define a first set of colors that approximate the first pixel color set, and said first set of indices map the first set of colors to the first pixel color set;

wherein said third and fourth codewords define a second set of colors that approximate the second pixel color set, and said second set of indices map the second set of colors to the second pixel color set.

Regarding claims 46-51, since these claims depend upon claim 45, they are also allowable for the same reason.

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

Art Unit: 2624

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Information

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anh Hong Do whose telephone number is (703) 308-6720.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-4700 or 4750. The fax phone number for this Group is (703) 872-9314.

December 30, 2002.

